A Proposal for the Development and Expansion of Broadband Connectivity for Rural Hospitals and Healthcare Providers in the State of Texas

In Response to the Federal Communications Commission's (FCC) Rural Health Care Pilot Program

WC Docket No. 02-60

Organizations of the Proposed Network:

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Texas Organization of Rural & Community Hospitals
Community Hospital Foundation of Texas
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The Way Texas Hospitals communicate ...

Table of Contents

Page

Executive Summary 3

1. Identify the Lead Applicant / Fiscal Agent and Describe the Proposed Network – Partner Organizations, Purpose, and Responsibilities 5
   A. The Proposed Network as a Viable Business Model 5
   B. Description of Partner Organizations – THN, TORCH, CHFTX & STHS 8

2. Goals and Objectives of the Proposed Network 10
   A. Background 10
   B. Network Goals 10
   C. Network Objectives (Year 1 and Year 2) 11

3. Estimated Costs of the Proposed Network 12
   A. Budget Narrative and Justification 12
   B. Proposed Budget (Year 1 and Year 2) 16
   C. Evidence of Cost-Effectiveness 16
   D. Summary of Wavier Requests 16

4. For-Profit Network Participants 17

5. Sources of Financial Support and Anticipated Revenue 17

6. Healthcare Facilities Included in the Network 18

7. Experience in Developing and Managing Telemedicine Programs 18

8. Project Management Plan 19
   A. Leadership and Management Structure 19
   B. Work Plan 21
   C. Budget Proposal Schedule 23
   D. Network Performance Metrics, Evaluation, and Reporting 23

9. Program Coordination throughout the State 24

10. Sustainability Plan and Strategy 25

Attachments 27
   A. Organization's Contact Information 28
   B. Participant List, Contact Information, RUCA Code, and HPC # 29
   C. Map of Participating Facilities 30
   D. Map of Current and Planned Network for Year 1 and Year 2 31

Executive Summary

Network Partners:

The Texas Healthcare Network, serving as the lead applicant and fiscal agent, submits this application on behalf of the proposed network for the development and expansion of broadband connectivity for rural hospitals and healthcare providers in the State of Texas. The proposed network consists of Texas Healthcare Network (THN), Texas Organization of Rural & Community Hospitals (TORCH), Community Hospital Foundation of Texas (CHFTX), and Southeast Texas Health System (STHS).

Network Vision:

The vision of this collaborative partnership is to extend high bandwidth connectivity to isolated rural healthcare communities in Texas in an intelligent, cost-effective, secure, and sustainable design to encourage the provision of telehealth and telemedicine to improve access to quality health services across the continuum of care that meet local needs. To fulfill this vision, the proposed network has adopted the following core strategies and goals for the development of a statewide, rural health information and communications infrastructure.

Network Strategies:

- Use of strategic partnerships and alliances to share, leverage, and aggregate resources, information, and expertise
- Use and integration of existing, state-funded network infrastructure to expand and develop new broadband connectivity for isolated, rural and frontier healthcare providers
- Use of innovation, economy, and superb technical competency in the planning, design, architecture, and deployment of a private, fully secured network
- Compliance with applicable standards of security, privacy, and interoperability
- Use of measurable performance metrics to evaluate the return on public investment and the network's short-term and long-term value and utility

Network Goals:

By these strategies the partnership recognizes that the primary goal of the network in reaching the "last mile" must, first and foremost, enable cost-effective and reliable broadband connectivity to isolated rural healthcare providers; concurrently, the network must provide a mechanism that empowers rural providers to connect to regional, statewide, and dedicated national backbones, such as Internet2 and National Lambda Rail, to access advanced telecommunications and information services, resources, and applications that improve the provision and delivery of rural healthcare and ultimately enhance the health and quality of life of rural citizens.

To this end, the goals of the proposed network include:

- Conduct a plan for an intelligent, cost-effective and sustainable design, architecture, build-out, and deployment of an internet-based secure private network for rural Texas hospitals. This network will provide a minimum bandwidth of 45 Mbps to rural hospitals, and will explore the cost-effectiveness of piloting wireless technology for up to eight separate regional hospital networks throughout Texas; each regional pilot network will consist of at least five hospitals.

- Upgrade a significant number of current member hospitals to the new network over a span of two years. During the first year upgrade a select number of current member hospitals to evaluate the effectiveness of the network design.

- Provide secure gateways to the network to facilitate collaboration with other healthcare networks throughout Texas and the country.

- Develop a plan for prioritizing and deploying advanced healthcare applications, such as telehealth and telemedicine services, long distance education and information services, EHR/EMR, and PACS (electronic radiology) to enable rural facilities to deliver high quality and cost-effective healthcare to their rural communities.

- Evaluate and document the overall effectiveness and return on investment of the new network infrastructure.

The partner organizations of the consortium are pleased to have this unprecedented opportunity to submit this proposal for the development and expansion of a broadband health information network that will enable rural hospitals and healthcare providers in the State of Texas to access essential, quality services across the continuum of care that meet local needs. With a current combined constituency of more than 150 rural hospitals and more than 120 rural health clinics, the consortium represents one of the largest rural health networks in Texas and in the nation. If funded, we are confident that the proposed network will be deployed successfully and will demonstrate measurable value replicable for rural communities both in Texas and elsewhere across the country.

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1. Identify the Lead Applicant / Fiscal Agent and Describe the Proposed Network, Partner Organizations, Purpose, and Responsibilities

A. The Proposed Network as a Viable Business Model:

The Texas Healthcare Network (THN) will serve as the lead applicant for the proposed network and will be legally and financially responsible for the conduct and performances of the activities of the proposed project. The proposed network consists of the Texas Healthcare Network (THN), the Texas Organization of Rural & Community Hospitals (TORCH), the Community Hospital Foundation of Texas (CHFTX), and the Southeast Texas Health System (STHS). A description of the partner organizations is provided below, and their contact information is provided in Attachment A.

Fully implemented, the proposed network would encompass more than 150 rural and community hospitals and more than 120 associated rural health clinics, which presently make up the combined constituency of the partner organizations. As the largest rural hospital network in Texas (and one of the largest in the nation), TORCH currently serves a membership of 150 rural and community hospitals, of which 54 hospitals are also members of CHFTX. Forty-five facilities in the CHFTX network currently have point-to-point (T1) connections, with the rest migrating to the same capability or higher. As these facilities continue to upgrade their information technology infrastructure to meet the increasing demands of the technology- and data-intensive healthcare industry, and as CHFTX continues to grow its membership to 75 hospitals by year-end 2007 and 100 hospitals by year-end 2008, the proposed network will be poised to serve the communications needs one of the largest rural health information networks in Texas.

The viability of the proposed network rests on the following foundational strategies and the consortium's combined strengths, experiences, capabilities and strategic partnerships:

Network Strategies:

- Use of strategic partnerships and alliances to share, leverage, and aggregate resources, information, and expertise
- Use and integration of existing, state-funded network infrastructure to expand and develop new broadband connectivity for isolated, rural and frontier healthcare providers
- Use of innovation, economy, and superb technical competency in the planning, design, architecture, and deployment of a private, fully secured network
- Compliance with applicable standards of security, privacy, and interoperability
- Use of measurable performance metrics to evaluate the return on public investment and the network's short-term and long-term value and utility

Network's Strength, Experiences, Capabilities, and Strategic Partnerships:

This consortium consists of partner organizations which, collectively and individually, have unique strengths and relevant experiences, capabilities, and strategic partnerships that are essential for the success of the proposed activities, if funded. These being:

- The State's largest rural hospital network, currently consisting of 150 rural and community hospitals (which account for approximately 80% of the State's rural hospitals) and more than 120 rural health clinics throughout Texas. Each member of the consortium has a reputable and long-standing partnership with the rural Texas hospitals, and thus has an intimate understanding of their varied needs, priorities, and challenges.

- The largest rural telecommunications infrastructure network, currently consisting of 54 rural facilities. The network has legislative support through Senate Bill 9 of the 79th Texas State Legislature and is funded partially by the Texas Department of State Health Services (DSHS) to support a rural and public health information network (PHIN) infrastructure.

- The largest rural hospital network in Texas that utilizes the Universal Service Funds (USF) subsidy program. The network's ongoing participation in the FCC's Rural Health Care Program demonstrates its understanding of the FCC's priorities and its familiarity of and experience with the program's current processes and procedures.

- The network has been in existence since 1999 demonstrating the sustainability of a well-designed network infrastructure and the ability of rural Texas healthcare facilities to collaborate for their mutual benefit. In requesting infrastructure build-out subsidy through the Pilot Program, this viable business model will serve as a requisite foundation for the expansion and future developments of the network.

- The network's managing partner, Texas Healthcare Network (THN), has demonstrated the ability to develop strategic partnerships to deliver cost-effective healthcare applications to network members. These include: a pilot telemedicine program with University of Texas Medical Branch (UTMB) at Galveston; an encrypted e-mail system with Kodak; a PACS (radiology) system with Philips; and a hospital-based Medicaid enrollment support with the state of Texas Health and Human Services Commission (HHSC). The organization is in the process of developing a strategic partnership with CHFTX and STHS to define and implement a rural Texas Regional Health Information Organization (RHIO).

Innovative and Effective Uses of the Proposed Network:

Because connectivity offers the opportunity for information exchange and knowledge sharing, at the heart of this proposal is the aim to build and sustain a network design that enables reliable and cost-effective, high-speed connectivity. In doing so, this proposal represents an empowerment effort towards innovative and effective uses of the network, including serving as a platform for:

- Broader connectivity and collaboration: In providing high-speed connectivity to isolated rural hospitals (*i.e.*, reaching the "last mile" providers) and simultaneously to connect them through points of presence (POP) to regional, statewide, and dedicated national backbones, rural facilities will have increased access to advanced telemedicine, communications and information services and technologies. With the proposed network in place, the CHFTX/Alliance/THN network will collaborate with other healthcare providers, University Health Sciences Centers and higher education institutions, and state health agencies to build a statewide, integrated regional health information system (such as a statewide RHIO), with the end goal of empowering rural hospitals and healthcare providers with the mechanism to deliver the highest quality of care possible in a manner that safeguards the patients' health information, while reducing healthcare costs.

- Development and delivery of advanced healthcare services and applications: The deployment of this network is a critical enabling step towards advanced communications capabilities and information technologies such as telemedicine consultations, electronic medical records (EMR), and digital radiology (PACS/CT). These end-user value propositions cannot occur without first establishing a reliable high bandwidth network.

- Emergency response and disaster recovery: The network can provide rapid and timely communication and information exchange for community response to health emergencies, disease outbreaks, national disasters, and bioterrorism threats.

- Public health information network and syndromic disease surveillance: The network can provide a secure, single login, and role-oriented access to public health alerts and syndromic disease monitoring and surveillance.

- Tele-education and distance learning: The network can provide access to a vast array of distance learning and continuing and medical education opportunities.

- Research and resource development: The network can provide a mechanism for the creation of a virtual, limitless knowledge center.

In sum, the proposed network strategies; its combined strengths, experiences, capabilities, and strategic partnerships; and the multitude of innovative and effective uses of the proposed network (some outlined above) represent the fundamental business model by which the current proposal, if funded, will be successful. The consortium understands that success hinges not only on the execution of these strategies, but also on the ability to continually generate value by increasing connections, on the one hand, to as many "last mile" facilities as economically feasible, and on the other hand, to establish partnerships to link rural facilities to a broader source of advanced information and services. By keeping costs reasonably low, by calling for each user to pay a portion of the costs for the service, and by connecting them to an ever-growing source of information, programs, resources, and expertise the proposed network will create value, and thus be sustainable.

B. Description of Partner Organizations:

Texas Healthcare Network – THN

Founded in 2001, Hospital Networks Management, Inc., is a for-profit Texas corporation, doing business as (dba) Texas Healthcare Network (THN). THN has the mission of aggressively pursuing highly effective, low-cost health information technology (IT) solutions for small to medium sized healthcare organizations, along with developing a broad base of both technical and business knowledge of healthcare processes to provide assistance in achieving hospital productivity and efficiency. Since 2001, THN has grown to support over 50 rural and community hospitals across Texas through its partnership with CHFTX. New services and functions are continually added to meet the IT operational and regulatory requirements that healthcare organizations are facing.

Today, THN provides the administrative and operational management for the CHFTX network infrastructure. For this proposed Pilot Program, THN will provide overall project and fiscal management of the plan. To this end, THN has successfully managed Texas Infrastructure Fund (TIF) grants, the Texas Department of State Health Services grant, which partially subsidizes the CHFTX public health information network, and the USF program for 54 rural facilities in Texas.

Texas Organization of Rural & Community Hospitals – TORCH

Founded in 1990, the mission of the Texas Organization of Rural & Community Hospitals (TORCH) is to be the principal advocate, voice, and leadership organization that addresses the special needs, issues, and priorities of rural and community hospitals in Texas. Over the last 17 years, TORCH has become a premier, nationally-recognized organization that provides a full range of quality services in the areas education, communication, advocacy, representation, performance and quality improvement, and professional and leadership development (through its Leadership & Management Institute). Serving a constituency of more than 150 rural and community hospitals and managing an affiliated network of more than 120 Rural Health Clinics (RHCs), TORCH represents one of the largest rural hospital and provider networks in the country. The organization's growth over the years is attributed largely to its strong tradition, vigilance, and passion to the cause of rural providers and its successes are reflected by the tremendous ongoing support and confidence of its growing membership and state and national partners.

Community Hospital Foundation of Texas – CHFTX

The Community Hospital Foundation of Texas (CHFTX) is a 501(c)(3) non-profit subsidiary of TORCH. Founded in 1999 as the Texas Rural Hospital Telecommunications Alliance, the purpose of the organization was to develop a statewide infrastructure to provide an integrated healthcare delivery and information network for rural Texas hospitals and their local communities. Today, the network, restructured as the Community Hospital Foundation of Texas, consists of 54 rural hospitals and their health clinics and has evolved into an internet-based, dedicated virtual private network (VPN) as a more cost-effective

structure. The CHFTX hospital network is support in part by the Department of State Health Services (DSHS) using funds from the Centers for Disease Control and Prevention. The CHFTX network is managed by the Texas Healthcare Network (THN) through a service partnership. All facilities in this network currently participate in the Universal Service Fund (USF) program and are connected by a VPN to both the CHFTX Hospital Network as well as the State's Public Health Information Network (PHIN).

The mission of CHFTX (and its purpose for participating in this consortium) is to advance the cause of rural hospitals by leveraging funds and resources to develop and support infrastructure and programs to enhance access to essential, high-quality healthcare, advanced telecommunications, and information services. To this end, CHFTX has adopted a strategic focus in expanding broadband connectivity, telecommunications capabilities, and related health information technologies that would enable a secured and cost-effective transport, exchange, and management of interoperable electronic health information to improve the quality of care for rural citizens.

TORCH and CHFTX will be active participants in this network consortium. Through the organizations' extensive experience and capability in program planning, development, implementation, and management, as well as their leadership role among rural Texas hospitals and healthcare providers, the organizations will serve crucial roles in building consensus, facilitating partnerships, leveraging resources, and contributing its expertise and resources wherever needed to ensure the success of this proposed network.

Southeast Texas Health System – STHS

Southeast Texas Health System (STHS) is 13-year old a non-profit, taxable entity that is equally owned by seven hospitals along the Gulf Coast. STHS integrates healthcare both locally and regionally in a way that preserves local control and maintains the independence of member institutions. Its members share the common goals of operating a cost-effective, quality integrated healthcare delivery system to provide a continuum of healthcare services and products.

In 2005 STHS began a Health Information Technology (HIT) project to provide an infrastructure to support collective, aggregated data to conduct evidence-based healthcare thus increasing access, improve quality, and create cost efficiencies. To date, STHS created a centralized data repository, purchased and implemented software and hardware for its member hospitals, and developed a patient and provider portal. STHS is in the process of adding analytical tools for the providers and a secure portal that supports patient centricity. The immediate benefits of this project are the enabling technology which allows stakeholders in seven counties, particularly patients, to access to their Continuity of Care Record.

2. Goals and Objectives of the Proposed Network

A. Background:

In recent years there have been a number of developments in improving connectivity in rural America with varied degree of success. The challenge of bridging the digital divide and the story of the social and economic development in rural areas has been in large part a story about information and technology infrastructure, which holds significant potential to drive economic growth and efficiency, to play a vital role in quality healthcare services and delivery, and to enhance the overall quality of rural life. Central to this challenge is the deployment of reliable connectivity that will enable the secured exchange of information and resources. Through the Federal Communications Commission's (FCC) Rural Health Care Pilot Program, there is now an unprecedented opportunity to improve rural healthcare by the use of advanced telecommunications and broadband technologies to encourage the provision of telehealth, telemedicine, and information services and to connect remote rural providers to regional, state, and national networks. This proposed network aims to demonstrate an effective model for rural broadband deployment that is intelligent, secured, cost-effective, and sustainable. The network consists of strategic partner organizations that, collectively and individually, have a proven history and an intimate, long-standing partnership with rural hospitals, healthcare providers and communities in Texas. Moreover, this application represents and serves the largest network of rural Texas facilities that are also current participants of the FCC's Universal Service Fund program.

B. Network Goals:

The goal of the proposed network is to develop a robust, secure, and state-of-the-art Internet-based broadband network to encourage access to advanced telehealth and telemedicine services. We define these services collectively to include a broad spectrum audio and video applications and information services, including long distance education, video-conferencing, public health information network and emergency response, and clinical applications such as electronic health/medical records (EHR/EMR),

To meet these critical needs, rural healthcare facilities will require dedicated access to the Internet backbone through a fully secured, affordable, and private network. Based on various telemedicine and electronic health information technology applications being utilized by many rural hospitals, the need for dedicated broadband access and advanced communications will increase, with a minimum bandwidth of 45 Mbps as a baseline. Additionally, as the volume of data and the critical need to transport and manage patient care data dynamically (in real time) increase, the ability to connect into regional, state, and national dedicated backbones, such as Internet2 or National Lambda Rail, will be essential to the continued growth and progress of the rural healthcare communities, and indeed, the development and welfare of rural citizens.

Specific goals of the proposed network include:

- Construct a detailed plan for an intelligent, cost-effective and sustainable design, architecture, build-out, and deployment of an internet-based secure private network for rural Texas hospitals. This network will provide a minimum

bandwidth of 45 Mbps to rural hospitals, and will explore the cost-effectiveness of piloting wireless technology for up to eight separate regional hospital networks throughout Texas; each regional pilot network will consist of at least five hospitals.

- Upgrade a significant number of current member hospitals to the new network over a span of two years. During the first year upgrade a select number of current member hospitals to evaluate the effectiveness of the network design.

- Provide secure gateways to the network to facilitate collaboration with other healthcare networks throughout Texas and the country.

- Develop a plan for prioritizing and deploying advanced healthcare applications, such as telehealth and telemedicine services, long distance education and information services, EHR/EMR, and PACS (electronic radiology) to enable rural facilities to deliver quality and cost-effective healthcare to rural communities.

- Evaluate and document the overall effectiveness and return on investment of the new network infrastructure.

C. Objectives: (Year 1)

The main objective of the proposed network is to provide reliable, secure, and low-cost high speed (minimum bandwidth of 45 Mbps) network connections. In many parts of rural Texas, the major obstacle to meeting this need is the ability to provide the dedicated access to the rural hospitals in a cost-effective way. Analysis shows that a majority of the remote rural areas lack the communications infrastructure to support the increased bandwidth needs of the rural providers; lack of infrastructure and coverage are due in part to low population density. To increase this capacity requires sizeable initial investment. Thus, a key objective of the proposed network is to upgrade and expand its current infrastructure to be capable of handling the increased bandwidth of the hospitals' dedicated access connections, as well as of connecting to regional, state, and national backbones, such as Internet2 and National Lambda Rail.

The initial build-out plan will provide 45 Mbps connections for hospitals that need increased capacity to delivery quality healthcare. To determine need and readiness, a survey study of the network members will be conducted. Based on the findings and a cost-benefit, business analysis, an intelligent and manageable network architecture and design will be developed, with key performance metrics to ensure the network is deployed in a manner that meet the needs of rural hospitals while supporting sustainable future growth and expansion.

In addition, the network will explore the cost-effectiveness of wireless technology as an alternative option to rural communications infrastructure by implementing a pilot program for three regional hospital networks using wireless technology. In the first year, each of the three networks will consist of at least five rural hospitals that belong to a natural service area and geography.

Moreover, the network planning and design will also explore models that best support regional health information exchanges; one such model may be the development of a broad-based support regional health information organization (RHIO) structure that will encompass strategic partnerships and alliances with providers, vendors, the University Health Sciences Centers, state health agencies, and other knowledge centers.

Objectives: (Year 2)

Year 2 objectives will focus on building and expanding the network by increasing the number of hospitals with 45 Mbps connections. The network will also focus on identifying collaborators and establishing gateways at various points of presence (POP) throughout the State to connect rural hospitals and providers into regional, statewide, and dedicated national backbones. The results of year 1 activities will be documented and reviewed to evaluate the cost-benefit and cost-effectiveness of the network infrastructure. Based on the analysis and outcomes of year 1 activities, additional year 2 objectives will be established.

Based on the cost-benefit analysis of the three pilot wireless networks implemented in year 1, up to five additional regional wireless networks will be consider in other regions of the state as part of year 2 activities.

3. Estimated Costs of the Proposed Network

This section provides the cost estimates for all the work items to design, develop, implement, and evaluate the proposed network for both year 1 and 2 of the Pilot Program. The proposed budget is presented for both year 1 and 2 activities. The consortium requests a total of $2,277,000 for year 1 activities, and a total of $3,475,000 for year 2 network expansion. Finally, evidence of the cost-effectiveness of the proposed network implementation is presented, followed by a summary of requested waivers to the current USF Rural Health Care rules.

A. Budget Narrative and Justification:

We recognize that the successful implementation a proposed network of this size will require a well designed plan, a detailed implementation timeline, and an effective, ongoing monitoring of all the work activities. To manage this proposed network development successfully, four key work items have been identified: (1) network architecture and design; (2) network development and implementation; (3) RHIO structure definition; and (4) program evaluation. The remainder of this section will provide a description and justification for each of these work items.

Network Architecture and Design: consists of a needs assessment survey and the network architecture and design.

Needs Assessment Survey:

The needs assessment survey will seek to discover and confirm information regarding issues like: What are the main barriers to high bandwidth connectivity in remote rural areas? What would rural hospitals and local healthcare providers expect to achieve if they had better, high-speed connectivity? What are the short-term and long-term telehealth, telemedicine needs, and information needs of rural healthcare providers? In addition, the survey will seek to identify local and statewide initiatives for improving connectivity that may be leveraged. Findings from this survey will aid in designing an appropriate and cost-effective network infrastructure for rural connectivity. Additionally, the survey findings will inform, guide, and refine both program design and implementation, as well as and resource allocation for year 2 objectives. Moreover, the survey will provide the baseline for a planning study that will contain: a market analysis of existing resources and capabilities, key support structures and vendors, and trends; technical and legal analyses of specifications, standards, and requirements; cost-benefit analysis (ROI and alternatives, trade off); risk assessment (technical, resource availability); and sustainability of the network over time.

Network Architecture and Design:

The current network utilizes dedicated 1.5 Mbps (T1) access to an Internet backbone with VPN circuits to implement a private, secure network for Texas rural healthcare facilities. This current network infrastructure will be upgraded to a dedicated minimum 45 Mbps (T3) access to an Internet backbone, with an Internet2 gateway and with an advanced VPN structure to serve future telemedicine and advanced information needs of Texas rural providers. To implement this high bandwidth network, the "last mile" minimum 45 Mbps dedicated access will be a "hub and spoke" or "star" architecture utilizing a cost-effective implementation of licensed wireless and land lines. The Internet backbone will be enhanced through the use of Quality of Service (QOS) technologies to enable the effective transmission of real-time data, such as video and audio. The VPN structure will be upgraded to provide enhanced security and a clientless, browser-based, role-oriented technology to connect into the network securely from anywhere. Network security will be provided by implementing a robust VPN structure to connect into the proposed network. A gateway connection architecture will be established to facilitate collaboration with other regional healthcare networks. The network architecture and design document will be completed in year 1 of the Pilot program; after this baseline document is established, a review process will be ongoing through the remainder of year 1 and all of year 2 to insure the architecture and design is correctly and optimally implemented.

Network Development & Implementation: consists of: upgrading the security of the network infrastructure; deployment of high speed connections (45 Mbps); implementing gateway connections to collaborating networks; and provide training for network members.

Network Infrastructure Security Upgrade:

One of the most important, if not the most important, features of networks dedicated to healthcare information is the security of the network. From a cost-benefit perspective, the most economical way to build and expand a network is to utilize the public Internet infrastructure as a foundation and then implement a Virtual Private Network (VPN) on this foundation to provide a secure and reliable private network. With the mobility of today's workforce and the potential of natural disasters or terrorism necessitating the need to deliver healthcare away from the primary hospital facility, the need exists to provide secure network access efficiently and dynamically from anywhere. Thus, as a critical part of the security upgrade, a portal will be implemented to provide secure clientless access from anywhere that an Internet connection is available. Further, to insure the network is compliant with the HIPAA security rule, an annual security risk assessment of the network will be conducted. These activities will be on going through both year 1 and 2 of the Pilot Program.

High Speed Connections (45 Mbps):

Based on the network architecture and design it appears that the most effective implementation of the high speed connections is through a "hub and spoke" or "star" architecture utilizing a cost-effective implementation of licensed wireless and land lines. Base on this conclusion, the proposed budget supports the implementation of three of these hub and spoke's (each consisting of a minimum of five hospitals) during year 1 of the Pilot Program. During year 2 of the Pilot Program, the proposed budget supports the implementation of an additional five of these hub and spoke's, provided that the cost-benefit of the alternative wireless technology option is demonstrable. At the conclusion of year 2 of the Pilot Program, this would mean that the vast majority of the CHFTX/Alliance/ THN network members throughout rural Texas would have high speed connections.

Gateway Connections:

The network architecture and design document will define the gateway connection structure that facilitates connecting the proposed network with collaborating healthcare networks. During year 1 of the Pilot Program, up to three network gateway connection will be identified and implemented to verify the architecture and functionality. In year 2 of the Pilot Program, additional gateway connections will be established based on need.

Network Training for Participating Facilities:

With the implementation of the proposed network appropriate training will be identified and provided to network members, as required. This will be an on-going activity during year 1 and 2 of the Pilot Program.

RHIO Structure Definition: consists of defining a rural health information system or structure that is viable and functional and that includes broad-based support and partnerships.

Structure Definition:

The strategic direction for the CHFTX/Alliance/THN network is to develop a regional health information exchange system which might be formed structurally as a Regional Health Information Organization (RHIO). This work task will determine the structure that will be implemented, and based on that structure, will verify that the network architecture and design can support the regional health information exchange structure. The work task will be completed in year 1 of the Pilot Program.

Identify Membership:

Based on the defined structure, the members of the regional health information exchange will be identified and the necessary agreement will be put in place with these organizations. Once the agreements are in place, gateway connections to the CHFTX/Alliance/THN network will be established with these organizations. The work task will be on going from the last part of year 1 and all through year 2 of the Pilot Program.

Program Evaluation: consists of an evaluation methodology and a reporting process. The work item is the same for both years 1 and 2.

Evaluation Methodology:

As part of the network performance monitoring and evaluation plan, a qualified Evaluator will conduct ongoing/periodic assessments of the project activities, based on the proposed work schedule (timeline) and the initial performance metrics. A quarterly report of the network's progress and accomplishments will be compiled and presented to the project management team for process improvement and strategy refinement. The assessment will be structured based on a "balanced scorecard" type framework, consisting of a combination of financial, operational, technical, and outcomes indicators, which will be used to identify opportunities to refine strategy execution and close performance gaps.

Reporting Process:

A report of key findings of the network's progress, accomplishments, and outstanding issues or challenges will be submitted to the FCC/USAC as required or upon request. At the conclusion of the first year's activities, a year-end project report will be submitted that describes the achievement of the network, with detailed discussions and analyses of issues involving network design, deployment, utilization, and lessons learned. A similar assessment and reporting process will be followed for year 2 activities, if funded.

B. Proposed Budget: (Year 1 and Year 2)

Work Items	Year 1	Year 2	Total
Network Architecture and Design: --Needs Assessment Survey/Study --Network Architecture and Design	$175,000	$100,000	$275,000
Network Development & Implementation: --Network Infrastructure Security Upgrade --High Speed Connections (45 Mbps) --Gateway Connections --Member Network Training	$1,900,000	$3,250,000	$5,150,000
RHIO Structure Definition: --Structure Definition --Identify Membership	$152,500	$75,000	$227,500
Pilot Program Evaluation: --Evaluation Methodology --Reporting Process	$50,000	$50,000	$100,000
Total	$2,277,000	$3,475,000	$5,752,500

C. Evidence of Cost-Effectiveness:

The cost-effectiveness of the proposed network will be measured by reviewing how effectively the implementation builds on existing infrastructure and resources, how the implementation of the "last mile" connection to the hospitals is made, and how sustainable the implementation will be over time. Initially, cost-effectiveness will be achieved through leveraging of existing state-funded infrastructure and resources (i.e., through the former TIF support and the current DSHS grant). In addition, purchasing power will be leveraged through current partnerships and alliances that provide direct and indirect support for the CHFTX/Alliance/THN network.

D. Summary of Wavier Requests:

At this time, there are three known areas in the USF RHC rules that we would request a waiver if the network is funded:

1) The current USF RHC rules only have a mechanism to disburse funds directly to a telecommunications carrier or an ISP. Through the nature of the proposed network activities, the consortium would need a mechanism to disburse funds to other organizations involved in design and implement the proposed network. Moreover, the consortium requests consideration of a mechanism that would allow a portion of the funds requested to support the operation and deployment of the proposed network.

2) The current USF RHC rules require a competitive bid process. Presently, the consortium have existing contracts with some vendors that would provide some of the services need for the implementation of this proposed network, and therefore we would prefer to continue to utilize these vendors to ensure continuity of services.

3) The consortium would propose issuing two status reports to the USF RHC each year of the Pilot Program to insure that the program funds are being managed responsibly and used as awarded. The content of these status reports would be defined jointly with USF RHC.

4. For-Profit Network Participants

If this proposed network project receives USF Pilot Program funding, one of the initial tasks is to complete the detailed business plan for the project. An item in the detailed business plan will be the determination of the total participant cost for each participating healthcare provider/facility. Eligible participants (according to the RHC program's requirements) will pay at least 15% of the total participant cost and the USF Pilot Program will pay up to remaining 85%. Any for-profit network participants will pay the total participant cost with no USF Pilot Program contribution.

5. Sources of Financial Support and Anticipated Revenues

If funded, the program will provide initial capital access up to 85% of the total cost to establish broadband connectivity for rural healthcare providers. The partner organizations and the participating rural facilities of the proposed network will be accountable for at least 15% of the remaining aggregate cost to support year 1 activities and to sustain the network infrastructure in subsequent years. Potential sources of financial support and anticipated revenues may include:

- Participant cost-sharing: a percent of the participants' cost-sharing will be derived from a combination of membership connection fee and a user application/service access fee. A membership fee will be assessed for all network members, a portion of which will cover their minimum 15% contribution. In addition, a per-user fee will be charged for access to various telemedicine and information services and applications that are enabled by and delivered through the network. This source of revenue will be reinvested into the network to pay for recurring operational costs and ongoing activities, including staffing and capital needs, future network expansion, and connections into larger regional, state, and national networks, for which an additional charged will be assessed.

- Expanded network membership: alternative sources of network revenue may come from expanded network membership categories to include nodes/users such as public health entities, community clinics and health centers, and physician offices, among others.

- Strategic partnerships, alliances, sponsors, and vendors: other potential revenue streams may come from strategic partnerships and alliances, such as education and research networks, the University Health Sciences Centers, the Public Health Information Network, and the telehealth/telemedicine providers. Network buying power will be leveraged with third-party providers of network content to keep costs low. Moreover, the network will leverage its corporate partners, vendors, sponsors, and private and public entities to support the network infrastructure.

- State support: the network will continue to leverage state funding to provide additional support in the development and expansion of this proposed network. Currently, the network receives some financial support from the Department of State Health Services to support the development of a rural hospital network, particularly for access to public health information and emergency response. In the future the consortium anticipates additional funding through the State as well as grants from public and private entities to support its mission.

6. Healthcare Facilities Included in the Network

Fully implemented, the proposed is envisioned to encompass 150 rural hospitals and more than 120 rural health clinics (RHCs) throughout rural Texas. These 150 rural and community hospitals are current members of TORCH. The proposed scope of work in year 1 would focus on a subgroup of 54 of the TORCH hospitals that are also members of the CHFTX Hospital Network as well as current participants of the USF program. A list of the healthcare facilities included in the proposed network is provided in Attachment B. Their addresses, contact information, associated RUCA codes, and HCP numbers are also provided. A map showing the location and distribution of these facilities is provided in Attachment C.

7. Experience in Developing and Managing Telemedicine Programs

The Texas Rural Hospital Telecommunications Alliance (Alliance) was established by TORCH in 1999. The purpose of the Alliance was to develop a telecommunications network for rural Texas hospital and deliver telehealth/telemedicine applications over the network. Through the use of the State's Telecommunications Infrastructure Funds (TIF) in the amount of $10,000,000 over a four-year period, the Alliance was successful in creating the largest rural hospital telecommunications network in the State of Texas. In 2002, the organization developed a service partnership with the Texas Health Network (THN) to manage the development and operation of the Alliance Network, which today has evolved into the Community Hospital Foundation of Texas (CHFTX) and consists of 54 rural hospitals and their associated rural health clinics. The CHFTX network is continually growing and anticipates encompassing up to 100 of the 150 current TORCH hospitals by year-end 2008. Along with the restructuring of the Alliance into the current CHFTX

network (following the sunset of TIF), the organization's mission has expanded to providing and developing a wider, more comprehensive range of quality services for rural hospitals. Today, The CHFTX/Alliance/THN Network is a functional and sustainable consortium of rural member hospitals that receive their T1 Internet connectivity through the Alliance/THN network currently participate in the USF RHC program.

The network's managing partner, Texas Healthcare Network (THN), has demonstrated the ability to develop strategic partnerships to deliver cost-effective healthcare applications to member hospitals in the network. Over the past seven years, these include: a pilot telemedicine program with University of Texas Medical Branch (UTMB) at Galveston; an encrypted e-mail system with Kodak; a PACS (radiology) system with Philips; a gateway connection to the Public Health Information Network (PHIN) to provide disease reporting and emergency response planning with the Texas Department of State Health Services (DSHS); and a hospital-based Medicaid enrollment support with the state of Texas Health and Human Services Commission (HHSC).

8. Project Management Plan

A. Leadership and Management Structure:

Texas Healthcare Network (THN) will serve as the lead applicant and fiscal agent on behalf of the proposed network. THN has long-standing experience working with organizations in this network, the former Telecommunications Infrastructure Funds (TIF), the Texas Department of State Health Services (DSHS), and rural facilities in Texas in utilizing the Universal Service Funds (USF) and leveraging state funding to establish and maintain a statewide rural healthcare network. THN certifies that it has the administrative, technical, and accounting capabilities, systems, and qualified staff to manage the pilot project and to report the progress and outcomes of the proposed project. The organization's existing structure, resources, and partnerships will ensure the success of the work performances of the proposed network, while minimizing the operational and administrative costs that would be incurred.

To ensure optimal implementation and utilization of the proposed network infrastructure, a sound leadership and management structure is required. The consortium recognizes that it is critical that network design and architecture, as well as service enhancements and technology changes must occur in a manner that maintains strong network performance, reliability, and security. Stakeholder input is essential in developing and refining strategic direction of the network. To jumpstart this process, THN will form and facility a team of qualified experts who will oversee and manage the project. The team will consist of:

(a) Project Manager who will provide the leadership for the success of the overall project by coordinating the proposed network activities, insuring work performance schedules are met, managing issues between work groups, and maintaining effective communication between all stakeholders involved in the proposed network development and implementation;

(b) Lead Network Engineer who will be the chief architect for the proposed network and will provide network architectural guidance to various individuals and organizations involved in this proposed network project;

(c) Program Evaluator will conduct ongoing/periodic assessment of the network's progress for the proposed work performances, present the findings to the project management team for process improvement and strategy refinement; and to submit key findings, discussions, and analysis to the FCC/USAC to facilitate their analysis of the effectiveness of the Pilot Program plan and implementation;

(d) Network Technical Advisory Committee (NTAC), which will be composed of representative(s) from each organization of the proposed network and rural hospital IT directors. The committee's purpose is to provide technical support, guidance, and direction in addressing specific issues in the network, planning, design, development, and implementation;

(e) Business & Industry Committee (BIC), which will be composed of Hospital Executives, Chief Information Officers (CIOs), and industry network professionals. The purpose of the committee is to provide input and guidance on strategic economic/business opportunities, advanced applications and solutions in telemedicine and related health information technologies which may be developed or delivered over the dedicated network. These value propositions may serve as benchmarks in demonstrating long-term sustainability and future investments.

(f) Resource & Network Sustainability Committee (RNSC), which will be composed of experts/specialists in fund development. This committee will work in tandem with NTAC and BIC to research, leverage, and identify resources to sustain the network infrastructure as well as services and programs delivered over the network.

The Project Manager, Lead Network Engineer, and Committee Chairs will serve as the primary network administrative structure on behalf of the network and will direct system-level activities and performances. Together, these individuals and workgroups will provide the foundation for a strong leadership and management structure, effective stakeholder input mechanism, and optimal use of the network resources.

Immediately upon award of the proposed project, a business and operational plan will be developed that will detail the network parameters, design requirements, and deployment processes. The business and operational plan will take into consideration the following key points:

- Significant engineering, architectural, and design challenges for a cost-effective rural broadband infrastructure; the plan will explore the feasibility and economy of alternative network technologies, including a pilot wireless technology among a subgroup of rural hospitals
- Co-location/parallelism considerations
- HIPAA, secondary, and tertiary security requirements
- Bandwidth sufficiency and build-out plan, based on advanced telehealth, telemedicine, and information services and application needs
- Membership structure/fee and sources of revenue

B. Work Plan:

Goal – Year 1	Activities	Deliverables	Expected Completion	Target Outcome/Impact
1. Construct a detailed plan for an intelligent, cost-effective and sustainable design, architecture, build-out, and deployment of an internet-based secure private network for rural Texas hospitals.	1a. Needs assessment 1b. Network architecture and design 1c. Network infrastructure security upgrade	1a. Needs assessment report 1b. Network design document 1c. Complete initial security upgrades	YR1 + 3 months YR1 + 4 months YR1+ 12 months	Input to network architecture and design Technical plan for network implementation Insure HIPAA security rule compliance
2. Upgrade a significant number of hospitals to the new network over a span of 2 years. During year 1 upgrade a select number of hospitals to evaluate the network design's effectiveness	2a. High speed connections 2b. Network training	2b. Implement three "hub and spoke" configurations 2b. Provide required member training	YR1 + 12 months YR1 + 12 months	Hospitals have high speed (minimum 45 Mbps) Internet access Users of network are informed
3. Provide secure gateways to the network to facilitate collaboration with other healthcare networks throughout Texas and the country.	Gateway connections	Implement up to 3 gateway connections for collaborating healthcare networks	YR1 + 12 months	Facilitate healthcare organizations collaboration
4. Develop a plan for prioritizing and deploying advanced applications, such as telehealth and telemedicine services, long distance education, and information services, EHR/EMR, and PACS (electronic radiology) to enable rural facilities to deliver quality and cost-effective healthcare to rural communities.	4a. Structure definition 4b. Identify membership	4a. Documented structure for a regional health information exchange 4b. Identify the initial members of regional health information exchange	YR1 + 6 months YR1 + 12 months	Defined framework for regional health information exchange Facilitate collaboration among members of regional health information exchange
5. Evaluate and document the overall effectiveness and return on investment of the new network infrastructure.	5a. Network evaluation 5b. Report Progress	Network evaluation report	YR1 + 3 months YR1 + 12 months	Documented format for status reports Track the status of the project and insure financial controls

Goal – Year 2	Activities	Deliverables	Expected Completion	Target Outcome/Impact
1. Construct a detailed plan for an intelligent, cost-effective and sustainable design, architecture, build-out, and deployment of an internet-based secure private network for rural Texas hospitals.	1a. Needs assessment survey 1b. network architecture and design 1c. network infrastructure security upgrade	1a. Completed planning study report 1b. Network design review process 1c. Complete all security upgrade tasks.	YR2 + 6 months YR2 + 12 months YR2 + 12 months	Documented plan to grow the network and maintain sustainability Review Network implementation for consistency with architecture Insure HIPAA security rule compliance
2. Upgrade a significant number of current member hospitals to the new network over a span of 2 years. During the first year upgrade a select number of current member hospitals to evaluate the effectiveness of the network design.	2a. High speed connections 2b. Network training	2a. Implement five additional "hub and spoke" configurations 2b. Provide required member training	YR2 + 12 months YR2 + 12 months	Hospitals have high speed (minimum 45 Mbps) Internet access Users of network are informed
3. Provide secure gateways to the network to facilitate collaboration with other healthcare networks throughout Texas and the country.	Gateway connections	2c. Implement additional gateway connections for collaborating healthcare networks	YR2 + 12 months	Facilitate healthcare organizations collaboration
4. Develop a plan for prioritizing and deploying advanced healthcare applications, such as telehealth and telemedicine services, long distance education and information services, EHR/EMR, and PACS	Identify membership	3b. Continue to identify members of regional health information exchange	YR2 + 9 months	Facilitate collaboration among members of regional health information exchange
5. Evaluate and document the overall effectiveness and return on investment of the new network infrastructure.	5a. Network evaluation 5b. Report progress	Network evaluation report	YR2 + 3 months YR2 + 12 months	Documented format for status reports Track the status of the project and insure financial controls

C. Budget Proposal:

Work Items	Year 1	Year 2	Total
Network Architecture and Design: --Needs Assessment Survey --Network Architecture and Design	$175,000	$100,000	$275,000
Network Development & Implementation: --Network Infrastructure Security Upgrade --High Speed Connections (45 Mbps) --Gateway Connections --Member Network Training	$1,900,000	$3,250,000	$5,150,000
RHIO Structure Definition: --Structure Definition --Identify Membership	$152,500	$75,000	$227,500
Pilot Program Evaluation: --Evaluation Methodology --Reporting Process	$50,000	$50,000	$100,000
Total	$2,277,000	$3,475,000	$5,752,500

D. Network Performance Metrics, Evaluation, and Reporting:

In order to assure the success of the proposed network in meeting the priorities of the RHC Pilot Program as well as the needs of local rural healthcare providers, the network proposes the following initial performance metrics, evaluation methodology, and reporting process:

Proposed Network Performance Metrics and Outcomes Domain for Year 1 Activities:

- Number of new T-1 connections/circuits and types of equipment installed
- Number of high bandwidth applications, advanced telecommunications or IT-related applications, programs, and services deployed post connection. Metrics may involve the number of participating hospitals that utilize or gain access to telemedicine consults, videoconferences, EMR/EHR solutions, PACS/digital radiology applications
- Number of patients served through applications enabled by the new network
- Cost savings or revenue generation (to be reported by network users)
- Node/end-terminal reliability metrics
- Delay, speed, capacity, and throughput report
- Utilization of network to connect into regional and national networks, such as regional education and research networks, University Health Sciences Centers, Internet2, National Lambda Rail, MedLearn, PubMed, *etc*

The initial (year 1) performance metrics will be refined, as necessary, based on the performance evaluation of the first year's activities, so that future outcomes may be aligned with year 2 resource allocation and corresponding goals and objectives.

Evaluation Methodology:

As part of the network performance monitoring and evaluation plan, a qualified Evaluator will conduct ongoing/periodic assessments of the project activities, based on the proposed work schedule (timeline) and the initial performance metrics. A quarterly report of the network's progress and accomplishments will be compiled and presented to the project management team for process improvement and strategy refinement. The assessment study will be structured based a balanced scorecard framework, consisting of specific financial, operational, technical, and outcomes indicators, which will be used to identify process improvement opportunities, refine strategy execution, and to close performance gaps.

Reporting Process:

A report of key findings of the network's progress, accomplishments, and outstanding issues or challenges will be submitted to the FCC quarterly, or upon request. A year-end project report will be submitted at the conclusion of the first year activities that will detail the achievement of the network that will contain detailed discussion and analysis of the work performances of year 1 activities, a cost-benefit analysis of network deployment and utilization, and as well as lessons learned and suggestions for future network activities, if funded.

9. Program Coordination throughout the State

The partner organizations of the proposed network have a proven history of and extensive experience in designing, implementing, and managing a wide range of programs and activities for rural hospitals and local healthcare providers. As the lead applicant, THN will be legally and financially responsible for coordinating and managing the work performances of the proposed network. Immediately upon funding, a project leadership and management structure (as outlined above in Section 8, "Project Management Plan"), will be established with the involvement and representation of all partner organizations, as well as participating rural hospitals and providers.

The current governance structure of the CHFTX/THN network provides for the following public accountability:

(1) The network is governed by a five-member Board of Directors consisting of rural (public and non-profit) hospital Administrators/Chief Executive Officers. This ensures that the network will be responsive and accountable to the needs of rural hospitals.

(2) The rural hospital members have governing boards that are comprised of local community leaders. These boards regularly review and approve strategic and

operating plans that address how the hospital is going to meet the needs of the community it serves.

(3) The communities are active in their local hospitals through hospital volunteer organizations, hospital boards, and fund-raising activities. The hospitals are continually seeking ways to improve the quality and breadth of the healthcare they offer to the local community.

As part of this application, the proposed network intends to assist rural hospitals to structure community-based focus groups that will involve local communities to ensure their input in the network planning, design, architecture, and deployment process.

Adding on to this flow of public accountability structure of the CHFTX/THN network, the Project Management Team, which will consist of the Project Manager, Lead Network Engineer, Evaluator, Technical Network Advisory Committee, Business & Industry Committee, and Resource & Network Sustainability Committee will develop processes and protocols for network operations. By involving representatives of the participating rural hospitals and members of the local communities, along with experts in network design and management, the proposed network will have established a community/consumer-based, check-and-balanced process that will serve to drive the direction and activities of the proposed network.

10. Sustainability Plan and Strategy

The network fully recognizes that in order to generate sufficient return and demonstrable value for the public investment of the proposed rural telecommunications infrastructure, an important calculus of the proposed network deployment must entail a sound sustainability plan and strategy. As such, we present the following fundamental business considerations that will constitute the core strategy of network's sustainability plan:

a. A plan for the network design, architecture, deployment, and sustainability will include a mechanism for ongoing planning and assessment of member and community needs, as well as refinement of network implementation approaches and strategies. This will be a Board of Director's approved process, based on the Project Management Team's consensus and recommendation, to ensure that the rural hospital participants and the communities they serve will have input into the planning process.

b. The network sustainability strategy will be based on a combination of a member fee and well as a service/application user fee. A percent of the participants' cost-sharing will come back into the network pay for recurring/incremental operational costs and ongoing activities, including its long-range leadership, staffing needs, and capital needs. By providing a network of value to the members' financial commitment will be sustained. The ROI/cost-benefit analysis will measure the value of network's value to its members.

c. Alternative sources of network revenue may come from expanded network membership to include nodes such as public health entities, community clinics and health centers, and physician groups/offices. In addition, other potential revenue streams may come from strategic partnerships and alliances, such as regional education and research networks, the University Health Sciences Centers, the Public Health Information Network, and the telehealth and telemedicine centers, among others. Network buying power will be leveraged with third-party providers of network content to keep costs low. Finally, the network will leverage its corporate partners and other private and public entities through sponsorship opportunities and fund-raising activities.

d. The network will develop a plan to build financial reserves by acquiring funds from diverse sources to meet both long-term operational and capital needs. The network will set service fees at an appropriate level above the cost of service and staffing overhead to provide funds for long-term operational and capital needs.

Attachments

Attachment A

A. Organization's Contact Information:

Texas Healthcare Network
P.O. Box 15384
Austin, Texas 78761-5384

Randall Zunke, President
Phone: (512) 452-0007
Fax: (512) 371-0119
Email: rzunke@thnetwork.net

Texas Organization of Rural & Community Hospitals
505 E. Huntland Dr., #150
Austin, Texas 78752

David Pearson, President/CEO
Phone: (512) 873-0045
Fax: (512) 873-0046
Email: dpearson@torchnet.org

Community Hospital Foundation of Texas
P.O. Box 14547
Austin, Texas 78761

Larry Krupala, President/CEO
Phone: (361) 275-3595
Fax: (512) 873-0046
Email: lkrupala@nodial.net

Southeast Texas Health System
231 S. Market Street, Suite 200
Goliad, Texas 77963

Shannon Calhoun, Executive Director
Phone: (361) 645-1762
Fax: (361) 645-1743
Email: scalhoun@goliad.net

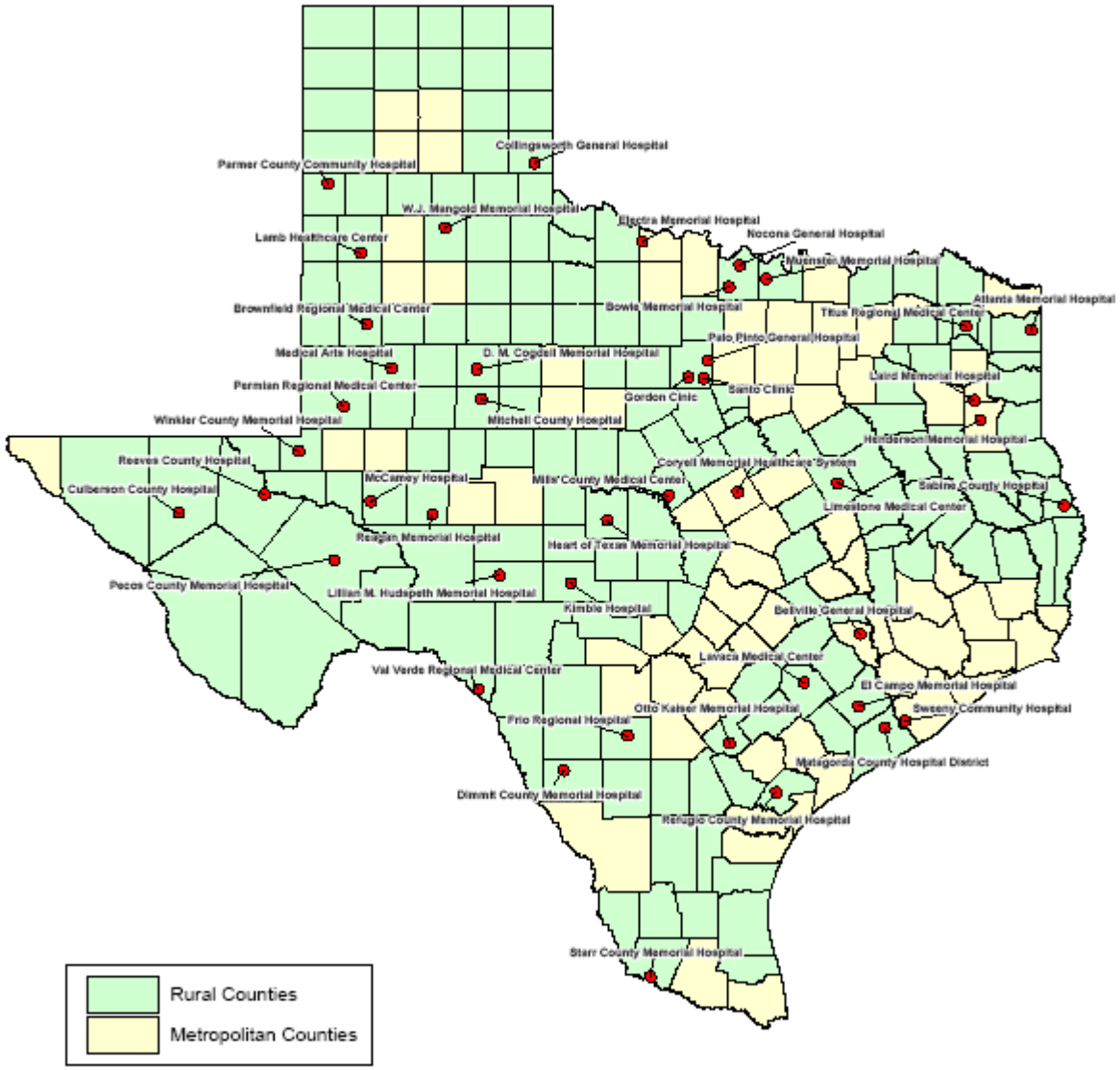
Attachment B

Participant List, Contact Information, RUCA Code and HCP #:

Number	Hospital	Address	City, State ZIP	Hospital Phone	RUCA2	HCP #
1	Atlanta Memorial Hospital	1007 S. William Street	Atlanta, TX 75551	903-799-3036	7.3	14472
2	Bellville General Hospital	44 N. Cummings	Bellville, TX 77418	979-865-3141	7.3	12685
3	Bowie Memorial Hospital	705 E. Greenwood Avenue	Bowie, TX 76230	940-872-9377	7	14158
4	Brownfield Regional Medical Center	705 E. Felt	Brownfield, TX 79316	806-637-3551	7	14142
5	Collingsworth General Hospital	1014 15th Street	Wellington, TX 79095	806-447-2521	10	11857
6	Coryell Memorial Healthcare System	1507 West Main Street	Gatesville, TX 76528	254-865-8251	4	16154
7	Culberson County Hospital	FM 2185 & Eisenhower Road	Van Horn, TX 79855	432-283-2760	10	11200
8	D. M. Cogdell Memorial Hospital	1700 Cogdell Boulevard	Snyder, TX 79549	325-574-7497	4	15941
9	Dimmit County Memorial Hospital	704 Hospital Drive	Carrizo Springs, TX 78834	830-846-2424	7	14475
10	El Campo Memorial Hospital	303 Sandy Corner Road	El Campo, TX 77437	979-578-5251	4	15942
11	Electra Memorial Hospital	1207 S. Bailey Street	Electra, TX 76360	940-495-3981	7.3	16153
12	Frio Regional Hospital	200 S. I H 35	Pearsall, TX 78061	830-334-3617	7.3	11771
13	Gordon Cinic	118 S. Main	Gordon, TX 76453	254-693-5211	10.2	15943
14	Heart of Texas Memorial Hospital	2008 Nine Road	Brady, TX 76825	325-597-2901	7	14152
15	Henderson Memorial Hospital	300 Wilson Streeet	Henderson, TX 75652	903-655-3702	5	14159
16	Kimble Hospital	2101 Main Street	Junction, TX 76849	325-446-3321	7	14477
17	Laird Memorial Hospital	1612 S. Henderson Boulevard	Kilgore, TX 75662	903-983-4218	4.2	14965
18	Lamb Healthcare Center	1500 S. Sunset	Littlefield, TX 79339	806-385-6411	7.3	14153
19	Lavaca Medical Center	1400 Texana Street	Hallettsville, TX 77964	361-798-3671	10	13139
20	Lillian M. Hudspeth Memorial Hospital	308 Hudspeth Avenue	Sonora, TX 76950	325-387-2521	7	14143
21	Limestone Medical Center	701 McClintic	Groesbeck, TX 76642	254-729-3281	7	14144
22	Matagorda County Hospital District	1115 Ave G	Bay City, TX 77414	979-245-6383	4	14478
23	McCamey Hospital	2500 Hwy 305 South	McCamey, TX 79752	432-652-8626	10	14479
24	Medical Arts Hospital	1600 N. Bryan Avenue	Lamesa, TX 79331	806-872-5727	4	14114
25	Mills County Medical Center	1501 W. Front Street	Goldwaithe, TX 76844	325-648-2263	10	16206
26	Mitchell County Hospital	997 W. I H 20	Colorado City, TX 79512	830-876-2424	7	11142
27	Muenster Memorial Hospital	605 N Maple Street	Muenster, TX 76252	940-759-2271	10.2	14480
28	Nocona General Hospital	100 Park Road	Nocona, TX 76255	940-825-3235	7	14145
29	Otto Kaiser Memorial Hospital	3349 S. Hwy 181	Kenedy, TX 78119	830-583-3401	7	14034
30	Palo Pinto General Hospital	400 SW 25th Avenue	Mineral Wells, TX 76067	940-325-7891	4	15944
31	Parmer County Community Hospital	1307 Cleveland	Friona, TX 79035	806-250-2754	7	13009
32	Pecos County Memorial Hospital	387 W IH 10	Fort Stockton, TX 79737	432-336-2241	7	14481
33	Permian Regional Medical Center	720 Hospital Drive	Andrews, TX 79714	432-523-2200	4	14482
34	Reagan Memorial Hospital	805 N. Main Street	Big Lake, TX 76932	325-884-2561	7	14161
35	Reeves County Hospital	2323 Texas Avenue	Pecos, TX 79772	432-447-3552	4	13777
36	Refugio County Memorial Hospital	107 Swift Street	Refugio, TX 78377	361-526-2321	7	14483
37	Sabine County Hospital	2301 Hwy 83 West	Hemphill, TX 76948	409-787-3300	10	11113
38	Santo Clinic	13965 S. FM 4	Santo, TX 76472	940-769-2018	5	15945
39	Starr County Memorial Hospital	2573 Hospital Court	Rio Grande City, TX 78582	956-487-9060	4.2	14484
40	Sweeny Community Hospital	305 N. McKinney	Sweeny, TX 77480	979-548-3311	2	13345
41	Titus Regional Medical Center	2001 N Jefferson Street	Mt Pleasant, TX 75455	903-577-6103	10.2	14146
42	Val Verde Regional Medical Center	801 Bedell Avenue	Del Rio, TX 78840	830-778-3691	4	14485
43	W.J. Mangold Memorial Hospital	320 North Main Street	Lockney, TX 79241	806-652-3373	10.5	16466
44	Winkler County Memorial Hospital	821 Jeffee Drive	Kermit, TX 79745	432-586-5864	7	14147

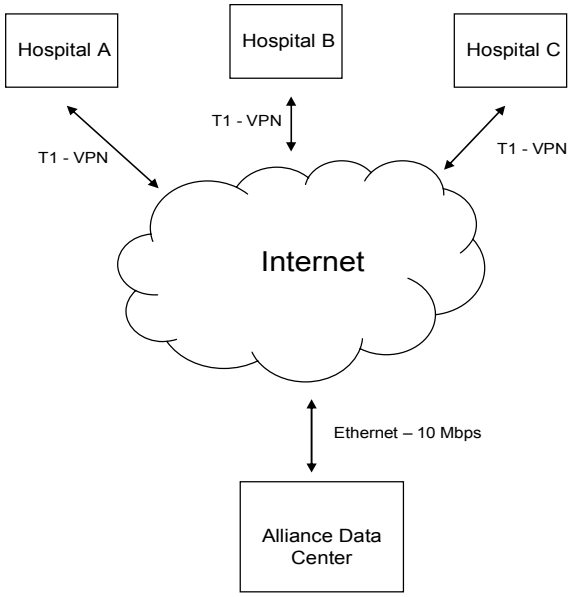
Attachment C

CURRENT CHFTX MEMBERS PARTICIPATING IN THE USF PROGRAM



Attachment D

Current CHFTX/Alliance/THN Network



Proposed CHFTX/Alliance/THN Network